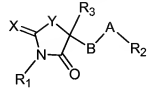
Amendments to the Claims

The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently amended) A composition comprising a compound of the formula



or pharmaceutically acceptable salts thereof together with a pharmaceutically acceptable carrier, excipient, or diluent, wherein

A is ~~aryl or heteroaryl~~furan;

B is C_1-C_6 alkyl or C_2-C_6 alkenyl;

X is sulfur, oxygen, $=CR_4R_5$, $=NR_4$, $=NC(O)R_4$, or $=NSO_2R_4$,

Y is sulfur, ~~oxygen, $-C(R_4)(R_5)$-, $-N(R_4)$-, $-NC(O)(R_4)$-, $-NSO_2(R_4)$-,~~ $-S(O)_2$-, or $-S(O)$-;

R_1 is ~~-H, -~~NH_2, C_1-C_6 alkyl, C_1-C_2 alkenyl, C_1-C_6 alkyl-S-C_1-C_6 alkyl, C_0-C_6 alky-aryl, C_0-C_6 alkyl-$C(O)OR_6$, C_0-C_6 alkyl-heteroaryl, C_0-C_6 alkyl-heterocyclyl, C_0-C_6 alkyl-carbocyclyl, -NH-SO_2-aryl, -C_0-C_6 alkyl-$C(O)NR_6R_7$, -C_0-C_6 alkyl-$C(S)NR_6R_7$, C_0-C_6 alky-heteroaryl-aryl, -NHC(O)-aryl, C_0-C_6 alkyl-C(O)NH-C_0-C_6 alkyl-C(O)-O-R_6, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-aryl, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-heteroaryl, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-heterocyclyl, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-carbocyclyl, -SO_2-R_6, C(O)-R_6 or -C(O)-OR_6, wherein each one of the alkyl, aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more R_5;

R_2 is -H, halogen, C_1-C_6 alkyl, C_0-C_6 alky-aryl, -NO_2, C_0-C_6 alkyl-C(O)-OR_6, C_0-C_6 alkyl-heteroaryl, C_0-C_6 alkyl-heterocyclyl, C_0-C_6 alkyl-carbocyclyl, -N(R_6)-C(O)NR_6R_7, -$NHSO_2$-aryl, C_0-C_6 alky-heteroaryl-aryl or -C(O)-R_6, wherein each one of the aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more R_4;

R_3 is -H, C_1-C_6 alkyl or C_2-C_6 alkenyl; or

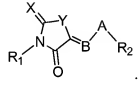
R_3 and B together with the carbon atom to which they are attached form an alkenyl or a spirocyclic ring;

R_4 is halogen, oxo, -C(O)OR_6, -NO_2, C_1-C_6 alkyl optionally substituted with halo, -C_1-C_6 alkoxy optionally substituted with halo, -CH_3, -SO_2NH_2 or -C(O)-OR_6;

R_5 is halogen, oxo, C_1-C_6 alkoxy, C_1-C_6 alkyl, C_0-C_6 alkyl-aryl, -NO_2, di(C_1-C_6 alkyl)amino, -CF_3, -OH, -SO_2NH_2 or -C(O)-OR_6; and

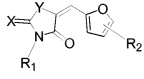
R_6 and R_7 are independently -H, halogen, C_1-C_6 alkoxy, C_1-C_6 alkyl, C_2-C_6 alkenyl, aryl, di(C_1-C_6 alkyl)amino, -CF_3, -OH or -C(O)-OR_6.

2. (original) The composition according to claim 1 wherein the compound is of the formula



.

3. (original) The composition according to claim 2 wherein the compound is of the formula



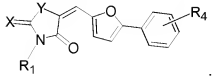
.

4. (Currently amended) The composition according to claim 3 wherein R_1 is ~~-H,~~ C_1-C_6 alkyl, C_1-C_2 alkenyl, C_0-C_6 alky-aryl, C_0-C_6 alkyl-C(O)OR_6, C_0-C_6 alkyl-heteroaryl, C_0-C_6 alkyl-heterocyclyl, C_0-C_6 alkyl-carbocyclyl or C_0-C_6 alky-heteroaryl-aryl, and R_2 is -H, halogen, C_1-C_6 alkyl, C_0-C_6 alky-aryl.

5. (Currently amended) The composition according to claim 4 wherein R_1 is ~~-H,~~ C_1-C_6 alkyl, C_1-C_2 alkenyl, C_0-C_6 alky-aryl, or C_0-C_6 alkyl-C(O)OR_6 and R_2 is C_0-C_6 alky-aryl.

6. (Currently amended) The composition according to claim 5 wherein R_1 is ~~-H,~~ allyl, phenyl or benzyl and R_2 is phenyl.

7. (original) The composition according to claim 3 wherein the compound is of the formula



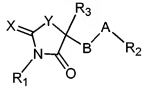
.

8. (Currently amended) The composition according to claim 7 wherein R_1 is ~~-H,~~ C_1-C_6 alkyl, C_1-C_2 alkenyl, C_0-C_6 alky-aryl, C_0-C_6 alkyl-C(O)OR_6, C_0-C_6 alkyl-heteroaryl, C_0-C_6 alkyl-heterocyclyl, C_0-C_6 alkyl-carbocyclyl or C_0-C_6 alky-heteroaryl-aryl, and R_4 is halogen, oxo, -NO_2, C_1-C_6 alkyl, -C_1-C_6 alkoxy, -CF_3, -SO_2NH_2, or -C(O)-OR_6.

9. (Currently amended) The composition according to claim 8 wherein R_1 is ~~-H,~~ C_1-C_6 alkyl, C_1-C_2 alkenyl, C_0-C_6 alky-aryl, or C_0-C_6 alkyl-C(O)OR_6, and R_4 is halogen, -NO_2, C_1-C_6 alkyl, -C_1-C_6 alkoxy, -CF_3, -SO_2NH_2, or -C(O)-OR_6.

10. (Currently amended) The composition according to claim 9 wherein R_1 is ~~-H,~~ allyl, phenyl or benzyl and R_4 is chloro, bromo, fluoro, -NO_2, -OCH_3, -CF_3 or -C(O)-OH.

11. (Currently amended) A composition comprising a compound of the formula



or a pharmaceutically acceptable ~~salts~~ thereof together with a pharmaceutically acceptable carrier, excipient, or diluent, wherein

A is ~~aryl or heteroaryl~~furan;

B is C_1-C_6 alkyl or C_2-C_6 alkenyl;

X is sulfur, oxygen, $=CR_4R_5$, $=NR_4$, $=NC(O)R_4$, or $=NSO_2R_4$,

Y is sulfur, ~~oxygen, $-C(R_4)(R_5)-$, $-N(R_4)-$, $-NC(O)(R_4)-$, $-NSO_2(R_4)-$,~~ $-S(O)_2-$, or $-S(O)-$;

R_1 is ~~-H,~~ -NH_2, C_1-C_6 alkyl, C_1-C_2 alkenyl, C_1-C_6 alkyl-S-C_1-C_6 alkyl, C_0-C_6 alky-aryl, C_0-C_6 alkyl-C(O)OR_6, C_0-C_6 alkyl-heteroaryl, C_0-C_6 alkyl-heterocyclyl, C_0-C_6 alkyl-carbocyclyl, -NH-SO_2-aryl, -C_0-C_6 alkyl-C(O)NR_6R_7, -C_0-C_6 alkyl-C(S)NR_6R_7, C_0-C_6 alky-heteroaryl-aryl, -NHC(O)-aryl, C_0-C_6 alkyl-C(O)NH-C_0-C_6 alkyl-C(O)-O-R_6, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-aryl, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-heteroaryl, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-heterocyclyl, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-carbocyclyl, -SO_2-R_6, C(O)-R_6 or -C(O)-OR_6, wherein each one of the alkyl, aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more R_5;

R_2 is -H, halogen, C_1-C_6 alkyl, C_0-C_6 alky-aryl, $-NO_2$, C_0-C_6 alkyl-C(O)-OR_6, C_0-C_6 alkyl-heteroaryl, C_0-C_6 alkyl-heterocyclyl, C_0-C_6 alkyl-carbocyclyl, $-N(R_6)$-$C(O)NR_6R_7$, $-NHSO_2$-aryl, C_0-C_6 alky-heteroaryl-aryl or -C(O)-R_6, wherein each one of the aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more R_4;

R_3 is -H, C_1-C_6 alkyl or C_2-C_6 alkenyl; or

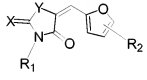
R_3 and B together with the carbon atom to which they are attached form an alkenyl or a spirocyclic ring;

R_4 is halogen, oxo, -C(O)OR_6, $-NO_2$, C_1-C_6 alkyl optionally substituted with halo, -C_1-C_6 alkoxy optionally substituted with halo, $-CF_3$, $-SO_2NH_2$ or -C(O)-OR_6;

R_5 is halogen, oxo, C_1-C_6 alkoxy, C_1-C_6 alkyl, C_0-C_6 alkyl-aryl, $-NO_2$, di(C_1-C_6 alkyl)amino, $-CF_3$, -OH, $-SO_2NH_2$ or -C(O)-OR_6; and

R_6 and R_7 are independently -H, halogen, C_1-C_6 alkoxy, C_1-C_6 alkyl, C_2-C_6 alkenyl, aryl, di(C_1-C_6 alkyl)amino, $-CF_3$, -OH or -C(O)-OR_6,

provided the compound is not a compound of the formula



X and Y are independently sulfur, oxygen, $-CR_4R_5$, $-NR_4$, $-NC(O)R_4$, $-NSO_2R_4$, $-SO_2$, or -SO;

R_1 is ~~-H,~~ $-NH_2$, C_1-C_6 alkyl, C_1-C_2 alkenyl, C_1-C_6 alkyl-S-C_1-C_6 alkyl, C_0-C_6 alky-aryl, C_0-C_6 alkyl-C(O)OR_6, C_0-C_6 alkyl-heteroaryl, C_0-C_6 alkyl-heterocyclyl, C_0-C_6 alkyl-carbocyclyl, $-NH-SO_2$-aryl, $-C_0$-C_6 alkyl-C(O)NR_6R_7, $-C_0$-C_6 alkyl-C(S)NR_6R_7, C_0-C_6 alky-heteroaryl-aryl, -NHC(O)-aryl, C_0-C_6 alkyl-C(O)NH-C_0-C_6 alkyl-C(O)-O-R_6, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-aryl, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-heteroaryl, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-heterocyclyl, C_0-C_6 alkyl-C(O)-NH-C_0-C_6 alkyl-carbocyclyl, $-SO_2$-R_6, C(O)-R_6, or -C(O)-OR_6, wherein each one of the alkyl, aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more R_5;

R_2 is -H, halogen, C_1-C_6 alkyl, C_0-C_6 alky-aryl, $-NO_2$, C_0-C_6 alkyl-C(O)-OR_6, C_0-C_6 alkyl-heteroaryl, C_0-C_6 alkyl-heterocyclyl, C_0-C_6 alkyl-carbocyclyl, $-N(R_6)$-

$C(O)NR_6R_7$, $-NHSO_2$-aryl, C_0-C_6 alky-heteroaryl-aryl, or $-C(O)-R_6$, wherein each one of the aryl, heteroaryl, heterocyclic and carbocyclyl are optionally substituted with one or more R_4;

R_4 is halogen, oxo, $-C(O)OR_6$, $-NO_2$, C_1-C_6 alkyl optionally substituted with halo, $-C_1$-C_6 alkoxy optionally substituted with halo, $-CF_3$, $-SO_2NH_2$, or $-C(O)-OR_6$;

R_5 is halogen, oxo, C_1-C_6 alkoxy, C_1-C_6 alkyl, C_0-C_6 alkyl-aryl, $-NO_2$, di(C_1-C_6 alkyl)amino, $-CF_3$, $-OH$, $-SO_2NH_2$, or $-C(O)-OR_6$; and

R_6 and R_7 are independently -H, halogen, C_1-C_6 alkoxy, C_1-C_6 alkyl, C_2-C_6 alkenyl, aryl, di(C_1-C_6 alkyl)amino, $-CF_3$, $-OH$, or $-C(O)-OR_6$.

12. (Withdrawn) A method of inhibiting ubiquitination in a cell comprising contacting a cell in which inhibition of ubiquitination is desired with a composition according to claim 1.

13. (Withdrawn) The method according to claim 12 wherein the cell is from a mammal.

14. (Withdrawn) The method according to claim 13 wherein the mammal is human.

15. (Withdrawn) A method of treating cell proliferative diseases or conditions comprising administering to a patient an effective amount of a composition according to claim 1.

16. (Withdrawn) The method according to claim 15 wherein the cell proliferative diseases are cancers.

17. (Withdrawn) The method according to claim 16 wherein the patient is human.

18. (Withdrawn) A method of inhibiting ubiquitination in a cell comprising contacting a cell in which inhibition of ubiquitination is desired with a composition according to claim 2.

19. (Withdrawn) A method of inhibiting ubiquitination in a cell comprising contacting a cell in which inhibition of ubiquitination is desired with a composition according to claim 3.

20. (Withdrawn) A method of inhibiting ubiquitination in a cell comprising contacting a cell in which inhibition of ubiquitination is desired with a composition according to claim 7.